CLAIMS

- 1. An ink comprising a water-soluble phthalocyanine compound, wherein in the spectral absorption curve of an aqueous solution of said phthalocyanine compound, the absorbance ratio b/a of the maximum absorbance b in the absorption band of 660 to 680 nm and the maximum absorbance a in the absorption band of 600 to 640 nm is less than 0.8 and the counter ion for the ionic hydrophilic group of said phthalocyanine compound is lithium ion.
- 2. An ink comprising a water-soluble phthalocyanine compound, wherein said phthalocyanine compound is represented by the following formula (I):

Formula (I):

$$\{W_4\}_P$$

$$R_7$$

$$R_8$$

$$\{W\}_n$$

$$R_5$$

$$N$$

$$N$$

$$N$$

$$N$$

$$N$$

$$N$$

$$R_2$$

$$\{W_2\}_m$$

wherein R₁, R₂, R₃, R₄, R₅, R₆, R₇ and R₈ each independently represents a hydrogen atom, a halogen atom, an alkyl group, a cycloalkyl group, an alkenyl group, an aralkyl group, an aryl group, a heterocyclic group, a cyano group, a hydroxyl group, a nitro group, an amino group, an alkylamino group, an alkoxy group, an aryloxy group, an amido group, an arylamino group, a ureido group, a sulfamoylamino group, an alkylthio group, an arylthio group, an alkoxycarbonylamino group, a sulfonamido group, a carbamoyl group, a sulfamoyl group, a sulfonyl group, an alkoxycarbonyl group, a heterocyclic oxy group, an azo group, an acyloxy group, a carbamoyloxy group, a silyloxy group, an aryloxycarbonyl an imido group, a

heterocyclic thio group, a sulfinyl group, a phosphoryl group or an acyl group and each may further have a substituent;

 W_1 , W_2 , W_3 and W_4 each independently represents the group represented by R_1 , R_2 , R_3 , R_4 , R_5 , R_6 , R_7 and R_8 , a sulfonylsulfamoyl group or an acylsulfamoyl group and each may further have a substituent, provided that at least one of W_1 , W_2 , W_3 and W_4 is an ionic hydrophilic group by itself or has an ionic hydrophilic group as a substituent, provided that the counter ion for the ionic hydrophilic group is lithium ion; 1, m, n and p each represents an integer of 1 or 2; and M represents a hydrogen atom, a metal element, a metal oxide, a metal hydroxide or a metal halide.

3. The ink as claimed in claim 2, wherein said formula (I) is represented by the following formula (II):

Formula (II):

wherein Z_1 , Z_2 , Z_3 and Z_4 each independently represents a substituted or unsubstituted alkyl group, a substituted or unsubstituted cycloalkyl group, a substituted or unsubstituted alkenyl group, a substituted or unsubstituted aralkyl group, a substituted or unsubstituted aryl group or a substituted or unsubstituted heterocyclic group, q_1 , q_2 , q_3 and q_4 each independently represents an integer of 1 or 2, q_3 , q_3 , q_3 , q_3 , q_4 , q_4 , q_5

4. The ink as claimed in claim 2, wherein said formula (I) is represented by the following formula (III):

$$\begin{pmatrix} R_{23} & NO_2S \end{pmatrix} \qquad \qquad \begin{pmatrix} N_{14} & N_{$$

wherein R_{21} , R_{22} , R_{23} and R_{24} each independently represents a hydrogen atom, a substituted or unsubstituted alkyl group, a substituted or unsubstituted cycloalkyl group, a substituted or unsubstituted alkenyl group, a substituted or unsubstituted aralkyl group, a substituted or unsubstituted aralkyl group, a substituted or unsubstituted heterocyclic group, V_{11} , V_{12} , V_{13} and V_{14} each independently represents a substituted or unsubstituted alkyl group, a substituted or unsubstituted alkyl group, a

substituted or unsubstituted alkenyl group, a substituted or unsubstituted aralkyl group, a substituted or unsubstituted aryl group, or a substituted or unsubstituted heterocyclic group, M has the same meaning as M in formula (I), and at least one of R_{21} , R_{22} , R_{23} , R_{24} , V_{11} , V_{12} , V_{13} and V_{14} has an ionic hydrophilic group as a substituent, provided that the counter ion for the ionic hydrophilic group is lithium ion.

- 5. The ink as claimed in claim 3, wherein in formula (II), $q_1=q_2=q_3=q_4=2$.
- 6. An ink for ink jetting, comprising the ink claimed in any one of claims 1 to 5.
- 7. An ink jet recording method comprising forming an image on an image-receiving material using the ink for ink jetting claimed in claim 6, the image receiving material comprising a support having thereon an ink image-receiving layer containing a white inorganic pigment particle.
- 8. A method for improving ozone gas discoloration of an image recorded material, comprising forming an image using the ink claimed in claims 1 to 6.
 - 9. A water-soluble phthalocyanine compound represented by the following formula (IV):

Formula (IV):

$$\{Z_3(0), q_4Z_4\} = A_{34}$$

$$\{Z_3(0), q_3S\} = A_{33}$$

$$\{S_1(0), q_4Z_4\} = A_{34}$$

$$\{S_2(0), q_4Z_4\} = A_{34}$$

$$\{S_3(0), q_4Z_4\} = A_{34}$$

wherein Z_1 , Z_2 , Z_3 and Z_4 each independently represents a substituted or unsubstituted alkyl group, a substituted or unsubstituted cycloalkyl group, a substituted or unsubstituted alkenyl group, a substituted or unsubstituted aralkyl group, a substituted or unsubstituted aryl group or a substituted or unsubstituted heterocyclic group, q_1 , q_2 , q_3 and q_4 each independently represents an integer of 1 or q_4 , q_4 , q_5 , q_5 , q_6 ,